

PHOSPHOR MATERIALS AND ILLUMINATION DEVICES MADE THEREFROM

ABSTRACT

[0065] This invention provides a phosphor material capable of absorbing primary light and converting that light into white light having a high color rendering index and illumination devices made from the phosphor material. The white light may have a color rendering index of 100 and may be produced with an efficiency of at least 30 lm/w. In one embodiment, the illumination device includes a secondary light source made from a plurality of Group IV semiconductor nanoparticles.